

An Essay

on the

Inhalation of Medicines

Respectfully Submitted

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by

G. W. Hudson M.D.

of

Wisconsin

Orphalation of Medicine

The ^{by}modus operandi of medicinal agents has for centuries furnished the medical world a theme, for much and animated controversy. Two general and almost exclusive theories, each having their equally exclusive partisans, have in the main been adopted — known as the sympathetic and the absorbent.

The adherents of the former maintain, that ~~these~~ medicines, when brought in contiguity with the peripheral nerves distributed upon the membranes lining the stomach and other viscera, produce pluviorina on all, even the most remote parts of the organism, through the medium of nervous sympathy.

The advocates of the latter, hold that all dissolved agents are taken up by the capillary vessels and lactals, and conveyed through the circulation to all parts of the body, producing their various phenomena by actual contact with the different tissues.

The strongest example of a purely sympathetic agency, are found in the action of Prussic and Hydrocyanic Acid. Those who have taken the former even in a remarkably minute quantity, have observed marked effects of it in a few seconds, though a particle of it had not been swallowed.

The latter has been known to produce symptoms on the human subject in fifteen seconds, and to prove fatal

to young cats in from five to ten seconds,
a time considered too brief for it to become
absorbed into the circulation.

The absorbent doctrine rests upon
the general fact, that mineral and
saline medicines, and such other
agents as are detectable by chemical
tests, and also those which possess
obvious properties, are generally capable
of being detected in the blood, and
often also in the exhalation from the lungs.

It affects not essentially our
inquiry which theory we may adopt
to explain the mode by which the
pathogenic effect of medicinal agents
are produced. It is highly problem-
atical that the infinitesimal atom
acts upon the same organs and

system, and through the same medium
as the gross material.

The intimate connection which the
anatomical and physiological relation
of the stomach and lungs with their
passage, bear upon our subject,
renders a general notice of them
necessary.

Thus organs are each lined with
a mucous membrane. That which
supplies the stomach is about a line
in thickness, and when undisturbed is
arranged in numerous rugae or folds,
and is continuous with the oesophagus
and the duodenum below. It is soft,
villous, and of a light pink color.

The lining membrane of the air
passage and lungs, is of an exceedingly

delicate structure, smooth and almost transparent. It extends through the minutest radicles of the bronchia, and expands into the formation of air-cells. The capacity of this organ for air is variously estimated. The median amount taken in at each inspiration is about thirty cubic inches.

Both these membranes are largely supplied with capillaries, the latter however more minutely than the former, for the purpose of exposing a vast amount of blood for oxygenation during the process of respiration. Some idea may be conceived of the great extent of the mucous surface of the lung, and of the infinite number of capillary vessels distributed upon

it, when we bear in mind that a middle sized man has about twenty-eight pounds of blood, and that all this is exposed upon the surface for aeration every four, and even three minutes.

Both viscera derive principally their nervous agency from the same source - the Pneumogastric nerve.

The function of one is the digestion of aliment conveyed into it, and by it effected the absorption of its nutritive proportion for the maintenance of the body. It also through the arterial and venous capillaries, appropriates all fluids by the process of endosmosis.

The other performs the important function of arterializing the blood

and separating from it, the carbon with which it is charged.

In neither do we find any special provision for the digestion or appropriation of medicinal agents, and hence has arisen the declaration that the human stomach was never intended as a receptacle for medicine.

Having briefly passed in review, those anatomical and physiological characteristics of the stomach and lungs, which are particularly concerned in this inquiry, the most casual observer will not fail to notice the analogy in the structure of their mucous membranes.

That the capillary vessels are principally concerned in the appropriation of medicinal agents, is pretty

clearly established by the carefully conducted experiments of Tidemann and Gmelin.

By incorporating in the food various substances possessing color, odor or chemical properties, by which they might be detected in the fluids - as Gamboge Madder and Blueberry, Musk, Camphor and Cassia seeds, and Saline substances as of Lead, Baryta and Mercury - and allowing a sufficient for them to be taken up. Traces of them were generally found in the venous blood and urine, whilst they were rarely detectable in the chyle.

That the capillaries which supply in still greater profusion the mucous membrane of the lungs, deriving their nervous agency from

The same source, and presenting a vastly greater extent of surface, would be competent to perform the same function. Could agents be brought in contact with this surface without disturbing their natural functions, appears to be a legitimate analogical induction.

It has been proved that water injected into the air passage, enters the pulmonary veins directly, or indirectly by the lymphatics—probably the former.

Examples are not wanting of morbid phenomena, and even fatal consequences, from the absorption and inhalation of medicinal and noxious agents. The odor of perfumery in the blood and urine after inhaling it from Sassafras, Turpentine, Tobacco

Ammonium and other remedies produce
their specific effect both speedily and
powerfully when inspired.

Sulphuretted Hydrogen, Carburetted
Hydrogen, Nitrogen, and Carbonic Acid
cause most immediate death by
asphyxia. The last has frequently
produced fatal results without simple
asphyxia, in sleeping rooms where
charcoal was burning. Sabadilla
is mentioned by Prof. C. B. Matthews,
as producing violent headache when
carried in the hat upon the head.

Rhus vernix causes very severe
Erysipelas by approaching in the
vicinity of it.

Epidemic and Contagious
diseases, as Small Pox, Scarletina, Measles

And Typhoid Fever, are supposed to be generated by inhaling their noxious effluvia. Intermittent and Remittent Fevers, also arise from miasmata.

As regards the agents before mentioned, Glonine and Hydrocyanic Acid, it appears to me that their modus operandi is very clear. They are highly volatile even in cool air, and far more so when introduced to an elevated temperature in the cavity of the mouth. Their volatile particles are conveyed by the first inspiration to every part of the vastly extended surface of mucous membrane in the lungs, they pass immediately into the capillaries, are carried chiefly to the left auricle and ventricle, and from thence to

the most remote and minute fibres
of the body. All this may take place
in the adult probably within ten
seconds, and in the infant in less
than half that time.

Hahnemann says "the remedy
acts just as powerfully by communicating
its medicinal influence to the system
through the nasal force and the lung,
as if a dose of the remedy had been
swallowed" and also, "by increasing
the number of respirations, the power
of the remedy may be increased a
hundred fold."

According to the views
of many of the most distinguished
and experienced homoeopaths of
the present day, it is of very little

consequence what potency what potency
is administered provided it be the proper
homoeopathic specific. Regarding this
observation as correct, and considering
it fully established that our medicines
can be introduced into the lung in a
sufficient quantity to impinge the
morbid system, without in any manner
disturbing the harmony of their functions,
the conclusion is legitimate, that the
full specific effect of remedies would
follow their administration by
inhalation. And certainly if the
high potencies are capable of modifying
diseases action, the aura of the thirtyeth
attenuation or lower could hardly
fail to act.

But we are not compelled

to rely upon reasoning to support
our position. We have the testimony
of one of the most correct medical
observers of his age - the great founder
of our system - who seemed to possess
nearly the same confidence in medicinal
inhalation, as in its exhibition by the stomach.

Many examples of a most
striking character of cures by
inhalation of the high potencies, are
given by Dr. Gross, and published
in the first volume of the Homoeopathic
Examiner.

In my own brief practice,
several cases have fallen under my
observation, exhibiting the most
brilliant results from this mode
of administration. The following case

of Stannatic Miasm, from the rarity
of its occurrence, and from its extreme
obstinacy to the Allopathic practice, is
worthy of notice. In the Spring of
1849, about three months after
commencing the homoeopathic practice,
I was called to Mrs. S. aged about 30
years, who was bitten in the hand the
day previous by a cat. She had felt
no untoward symptoms until this
morning when she became very stupid
and unconscious, and the jaws
firmly locked. I arrived in about
four hours after this symptom had
set in. The friends of course had not
failed to rub her well with Spirit of
Camphor and strong Assafoetida
into the mouth but all availed nothing.

All efforts had been made to arouse
her by shaking and pinching, without
making any impression. I immediately
took from my pocket a vial containing
the 13th potency of Thuja Louisa, and
placing it to her nostril, permitted
her to inhale twice. In about thirty
seconds a spasmodic action commenced
in the lower eyelids - this continued to
extend and in three minutes the facial
muscles were involved, and in another
minute she opened her eyes, which
were fixed, for the first time in four
hours. This dose continued to exert
its influence, and in twenty minutes
all the muscles relaxed, and she was
able to converse. There was a strong
tendency for some days after to a

return of the condition, which was readily removed by a repetition of the remedy.

I am disposed to think that the relative value of this mode of administering medicine has been far too little regarded by the profession. There are numerous cases in which there exists an urgent necessity of resorting to this mode - the patient not being able to swallow. Such are apoplexy, epilepsy, mania and paralysis of the muscles of deglutition, tetanus, hysteria, convulsion, and those diseases in which dysphagia exists. In the diseases of children it is of great advantage when we do not wish to disturb their quietude.

Another advantage which this method possesses over that by the stomach, arises out of the fact that this organ is made the receptacle of food and drinks of various and heterogeneous qualities, liable at all times to disturb the legitimate action of the medicine.

The minute quantity has to undergo an intermixture with its contents, rendering the time comparatively long before any considerable proportion of it can pass into the circulation. To produce a salutary reaction of the vital power against the disease, it would seem that the infusion or stimulus of the dynamized agent should be but momentary, so that the reactive force might exert its

full influence. When taken into the stomach, it requires from one to three hours for all its particles to enter the circulation, so that the last taken ~~may~~ might act prejudicial to the ~~reaction~~ reaction of the first.

This objection does not exist to inhalant medicine. It enters immediately the circulation, produces its impression in a few minutes, and leaves the vital organism full and uninterrupted time for reaction.

It may be objected—and with apparent reason—that when medicine is exhibited by the lungs, it is introduced into a medium of Carbonic acid, which might in some degree modify its properties.

This objection however seems to
exist in full force when taken
by the mouth. The respiratory
process is carried on through the medium
of the mouth and nostrils - and
under the most cautious manage-
ment, a certain amount of
expired air enters the cavity of the
mouth at every expiration. If it
possessed antiseptic properties, this
would be sufficient to destroy the
free effect of most medicines given.

If medicines however are proved
with this counteracting influence,
we do not consider it as exerting
a modifying influence on the
agent dynamically administered.

The writer would suggest

That all agents sufficiently volatile
to be taken into the lungs in a
quantity capable of producing
pathogenetic symptoms, should
be so proved in addition to
proving them by the stomach.

We are aware that many
high authorities regard the nerves of
the stomach as the medium through
which medicinal agents act upon
the organism. Even the true it would
not affect materially our general
position, as we have the same
nervous agency in the lungs,
which supplies the stomach, and
the objection urged against the
one would maintain near the
same relation to the other.

Should the Essay have the
desired effect, to call the
attention of the profession more
directly to this branch of inquiry,
the writer will feel amply
rewarded.

G. W. Chittenden M.D.